FSA Integration Partner

United States Department of Education

Federal Student Aid

XML Registry and Repository
Volume Estimates

Version 1.0

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Amendment History

DATE	SECTION/ PAGE	DESCRIPTION	REQUESTED BY	MADE BY
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1   Introduction

1.1   Purpose

The purpose of the XML Registry Volume Estimates document is to:

1.   Describe the XML Registry Site User Types and Estimated Volumes.
2.   Document the estimating factors and assumptions regarding the XML Registry's anticipated usage.
3.   Define the production volume estimates for the XML Registry.

1.2   Site Users

The XML Registry and Repository will be accessed by four user groups. Site usage patterns will depend on a user's group. The following table lists the user groups' descriptions and estimated volumes.

User Type	Description	Volume
Community User (Guest User)	Community Users (Guest Users) may access the XML Registry and Repository without logging into the application. These users will not have access to update or modify content that is stored in the Registry; however, they will have access to view and download information.	2,000
Community Reviewer	Community Reviewers may view comments in addition to having the same access privileges as Community Users.	10
Registered User	Registered Users will be able to modify and create new Core Components, Sector Libraries, and Message Specifications, in addition to viewing and downloading the documents. Registered Users will also be able to create and view comments for Core Components.	6
Administrator	Administrators will also be able to view, create and modify Core Components, Sector Libraries, and Message Specifications as well as create Users and organizations. Administrators will be able to create and deactivate all types of users.	2

1.3   Estimating Factors and Assumptions

The XML Registry Volume Estimates are based on the following factors and assumptions:

• There are approximately 6,000 institutions. 1/3 of these institutions use EDExpress, 1/3 have student information systems and wouldn't require access to the XML Registry and Repository, and 1/3 would access the Registry and Repository.
• There will be one representative from 1 out of 3 institutions interested in connecting to the site. This would lead to a user base of approximately 2,000 (out of 6,000 institutions). The

majority of these users will be Community Users with a few users that are also Community Reviewers

- Most users (90%) will only connect to the site every few months, and then only to download an updated Message Specification Schema file. The total duration of these sessions would be 10-15 minutes and then the user would be finished.
- Some users (10%) will also browse the informational pages for XML background. This will result in sessions of 30 minutes, but of minimal server load (browsing pages).
- Approximately 6 users will have the Registered User role, which means they will be able to make updates to the database. Updates will not be consistently made to the Core Components; they will only happen from time to time. Therefore update traffic will be minimal.
- Approximately 2 users will have the Administrator role. Administrator activities, such as adding and removing user accounts will only happen occasionally. Therefore, administrative traffic will be minimal.
- Assume a 10% growth in usage per year.

Seasonal Peaks (daily, weekly, or monthly times)
- Whenever a new schema is released for download there will be a spike in usage. We would expect a new schema to be released approximately 2-4 times a year. However, activity would consist of connecting to the site, and downloading a few XML Schema files totaling a few hundred kilobytes, taking a total of a few minutes.

Expected Concurrent User Load
- We estimate average concurrent users to be less than 20, with spikes up to perhaps 75 during the peaks described above. Most sessions will only last a few minutes. There are a few users that can actually update data in the site, and their sessions may last several hours, but that user population totals about 4-8 people.
- At any given time, no more than 75 (only for a peak) Community Reviewers and Users would be connected. Based on the session times described above, this would allow cycling through the entire user base in about 4-6 hours on a peak day.

1.4 Volume Estimates

This section provides estimates for the volume of page views for the XML Registry and Repository site. These estimates are based on the volume estimate assumptions listed above. The following table provides projected XML Registry site usage metrics and volumes.

Metric	Volume	
Total XML Registry Unique Users	2,018	
Total Site Visits per month	Community Users	2,000
	Community Reviewers	10
	Registered Users	6
	Administrators	2
	Total	2,018
Total Number Page Views per month	Community Users	6,000
	Community Reviewers	500
	Registered Users	1,200
	Administrators	100
	Total	7,800
Total Page Views, peak day	Community Users	3,000
	Community Reviewers	50
	Registered Users	25
	Administrators	10
	Total	3,085
Percentage of Users Making an Update per month	0.3% (only Registered Users and Administrators)	
Max. Concurrent Users	75 (during peaks 2-4x/year)	
Number of visits per user per month	1	
Page views per visit	3	
Peak Times	9AM – 9PM EST	
Average Waiting Time	30 seconds	